

F:1-14/Domain: signal sequence #status predicted <SIG>
 F:15-79/Domain: propeptide #status predicted <PRO>
 F:80-194/Product: nerve growth factor beta chain #status predicted <MAT>
 F:90-155,133-183,143-185/Disulfide bonds: #status predicted
 F:99/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 57.4%; Score 419.5; DB 2; Length 194;
 Best Local Similarity 63.0%; Pred. No. 1.3e-36;
 Matches 80; Conservative 10; Mismatches 22; Indels 15; Gaps 2;

QY 7 HRGEYSVCDSEEHVGNLTQATDLRGNEVTVLPVHRINNVKKOMFEYTCRVSKEIPGA 66
 Db 83 HRGVSVCSVSWVWGKTKATDTSKEVTVLPVNNVKKOYFFETTCVH-SPP----- 137
 QY 67 KPGQGVSGVAGTSSCGRIDNEHNSYCTNVHTFVRLTSTYKNOIAMFRIRINAAVCYL 126
 Db 138 -----SSGGRGLGIDARHNSHCTNHTFVRLTSENQVAMRLIRINAAVCYL 187
 QY 127 SRNSWRH 133
 Db 188 SRNSWRH 194

RESULT 3
 A:26311
 A:Molecule type: DNA
 A:Residues: 1-243 <EBE>
 A:Cross-references: GB:X04003; NID:963697; PIDN:CAA27633.1; PID:q1334740
 R:Wilson, D.; Perreel, C.; Frechlin, N.; Keller, A.; Behar, G.; Brachet, P.; Auffray, C.
 FEBS Lett. 203, 82-86, 1986
 A:Title: Molecular cloning of the avian beta-nerve growth factor gene: transcription in
 A:Reference number: A24857; MUID:86248129
 A:Accession: A24857
 A:Molecule type: DNA
 A:Residues: 118-243 <WIO>
 R:Meier, R.; Becker-Antre, M.; Goetz, R.; Heumann, R.; Shaw, A.; Thoenen, H.
 EMBO J. 5, 1489-1493, 1986
 A:Title: Molecular cloning of bovine and chick nerve growth factor (NGF): delineation of
 A:Reference number: A26312; MUID:86300647
 A:Accession: S00127
 A:Status: preliminary; not compared with conceptual translation
 A:Molecule type: DNA
 A:Residues: 121-243 <MEI>
 A:Cross-references: GB:M6810; NID:9212446; PIDN:AAA4894.1; PID:9212447
 R:Ibanez, C.F.; Hallboeck, F.; Ebdenda, T.; Persson, H.
 EMBO J. 9, 1477-1483, 1990
 A:Title: Structure-function studies of nerve growth factor: functional importance of his
 A:Reference number: S12532; MUID:90228346
 A:Accession: S12532
 A:Status: preliminary
 A:Molecule type: DNA
 A:Residues: 126-243 <IBA>
 C:Superfamily: nerve growth factor beta chain
 C:Keywords: growth factor
 F:1-125/Domain: signal sequence #status predicted <SIG>
 F:126-243/Product: nerve growth factor beta chain #status predicted <MAT>

Query Match 52.9%; Score 386.5; DB 2; Length 243;
 Best Local Similarity 57.3%; Pred. No. 4.9e-33;
 Matches 75; Conservative 12; Mismatches 29; Indels 15; Gaps 1;
 QY 2 ANDFLHGEYSVCDSEEHVGNLTQATDLRGNEVTVLPVHRINNVKKOMFEYTCRVS 61

Db 127 ABPVLHGEYSVCDSEEHVGNLTQATDLRGNEVTVLPVHRINNVKKOMFEYTCRVSKEIPGA 186
 QY 62 PLGAKRPGGVAGTSSCGRIDNEHNSYCTNVHTFVRLTSTYKNOIAMFRIRINAA 121
 Db 187 PV-----SSGGRGLGIDARHNSHCTNHTFVRLTSENQVAMRLIRINAAVCYL 231
 QY 122 CYCVLSRNSWR 132
 Db 232 CYCVLSRNSWR 242

RESULT 4
 A:14481
 A:Molecule type: DNA
 A:Residues: 1-235 <CAR>
 A:Cross-references: EMBL:X55716; NID:964914; PIDN:CAA39249.1; PID:964915
 C:Superfamily: nerve growth factor beta chain
 A:Status: preliminary
 A:Molecule type: DNA
 A:Residues: 1-235 <CAR>
 A:Cross-references: EMBL:X55716; NID:964914; PIDN:CAA39249.1; PID:964915
 C:Superfamily: nerve growth factor beta chain
 A:Status: preliminary
 A:Molecule type: DNA
 A:Residues: 1-235 <CAR>
 A:Cross-references: EMBL:X55716; NID:964914; PIDN:CAA39249.1; PID:964915
 C:Superfamily: nerve growth factor beta chain

Query Match 52.3%; Score 382.5; DB 2; Length 235;
 Best Local Similarity 59.3%; Pred. No. 1.2e-32;
 Matches 73; Conservative 10; Mismatches 25; Indels 15; Gaps 1;

QY 6 LHRGEYSVCDSEEHVGNLTQATDLRGNEVTVLPVHRINNVKKOMFEYTCRVSKEIPGA 65
 Db 124 LHRGEYSVCDSEEHVGNLTQATDLRGNEVTVLPVHRINNVKKOMFEYTCRVSKEIPGA 181
 QY 66 KPGQGVSGVAGTSSCGRIDNEHNSYCTNVHTFVRLTSTYKNOIAMFRIRINAAVCYL 125
 Db 182 -----SSGGRGLGIDARHNSHCTNHTFVRLTSENQVAMRLIRINAAVCYL 228

QY 126 LSR 128
 Db 229 LSR 231

RESULT 5
 A:NGMSMG
 A:Molecule type: DNA
 A:Residues: 1-307 <SCS>
 A:Cross-references: GB:V00836; NID:953364; PIDN:CAA24221.1; PID:953365
 R:Ulrich, A.; Gray, A.; Berman, C.; Dull, T.J.
 Nature 303, 821-825, 1983
 A:Title: Human beta-nerve growth factor gene sequence highly homologous to that of mo
 A:Reference number: A93305; MUID:83244969
 A:Accession: A93305
 A:Molecule type: DNA
 A:Residues: 1-307 <ULI>
 A:Cross-references: GB:K01759; NID:920051; PIDN:AAA9820.1; PID:9387495
 R:Angelletti, R.H.; Haymondson, M.A.; Bradshaw, R.A.
 Biochemistry 12, 100-115, 1973
 A:Title: Amino acid sequences of mouse 2.5s nerve growth factor. II. Isolation and ch

A:Reference number: A90366; MUID:73075048

A:Accession: A90366

A:Molecule type: protein

A:Residues: 188-216; N., 218-305 <ANG>

A:Title: Mouse nerve growth factor gene: Structure and expression.

A:Reference number: 149689; MUID:88038855

A:Accession: 149689

A:Molecule type: translated from GB/EMBL/DBJ

A:Residues: 1-307 <RES>

A:Cross-references: GB:M17298; NID:9193493; PIDN:AAA37687.1; PID:9467311; PID:9387171

A:Title: Sequence homology of human and mouse beta-NF subunit genes.

A:Reference number: 152891; MUID:84206565

A:Accession: 152891

A:Molecule type: translated from GB/EMBL/DBJ

A:Residues: 1-307 <RES>

A:Cross-references: GB:M14805; NID:9200053; PIDN:AAA39821.1; PID:9200054

A:Title: The active molecule is a dimer of identical chains associated by noncovalent

A:Comment: Nerve growth factor is found in submaxillary gland in large quantities and in

A:Comment: Nerve growth factor is found in submaxillary gland in large quantities and in

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A:Comment: Nerve growth factor is found in submaxillary gland in large quantities and in

Best Local Similarity 56.3%; Pred. No. 1.1e-31; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

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Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

Matches 71; Conservative 12; Mismatches 28; Indels 15; Gaps 1;

A:Residues: 46-286 <BOP>
 A:Cross-references: EMBL:X52599; NID:929476; PIDN:CA36832.1; PID:q29477
 C:Comment: Nerve growth factor is found in submaxillary gland in large quantities and in
 nic sensory ganglia in vivo and in vitro and to increase cellular neurotubule levels may
 C:Genetics:

A:Gene: GDB:NGFB
 A:Cross-references: GDB:120233; OMIM:162030
 A:Map position: 1p13.1-1p13.1
 A:Introns: 41/3
 C:Complex: nerve growth factor is composed of two alpha chains, two beta chains, and two
 C:Superfamily: nerve growth factor beta chain
 C:Keywords: glycoprotein; growth factor; submandibular gland
 F:1-166/Domain: signal sequence and propeptide (fragment) #status predicted <SIG>
 F:167-284/Product: nerve growth factor beta chain #status predicted <MAT>
 F:26,114,159,211/Binding site: carbohydrate (asn) (covalent) #status predicted
 F:181-246,224-274,234-266/Disulfide bonds: #status predicted

Query Match 50.4%; Score 368.5; DB 1; Length 286;
 Best Local Similarity 54.2%; Pred. No. 4.5e-31;
 Matches 71; Conservative 13; Mismatches 32; Indels 15; Gaps 1;

2 ANDELRGYSVCDSEHWNLTQATDLRGNEVTLPHYRINNVYKKQFEYETTCRVSK 61
 168 SHPIHREGFSVCDSEHWNLTQATDLRGNEVTLPHYRINNVYKKQFEYETTCRVSK 228
 62 PICGKPGGVSVCGRGIDNEHNSYCTNHTFVRALTSKNOJAMFIRINAA 121
 229 PV-----DSGCRGIDSKHNSYCTTHTFVKALTMGQKQAAWFRIDTA 273
 122 CVCVLSRNSMR 132
 274 CVCVLSRAVR 284

RESULT 9
 NGRBTA

nerve growth factor beta chain precursor - multimammate rat (Mastomys natalensis)

C:Species: Mastomys natalensis
 C:Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 18-Jun-1999

C:Accession: JT0343
 R:Fahnestock, M.; Bell, R.A.

Gene 69, 257-264, 1988

A:Title: Molecular cloning of a cDNA encoding the nerve growth factor precursor from Mas

A:Reference number: JT0343; MUID:9172070

A:Accession: JT0343

A:Molecule type: mRNA

A:Residues: 1-303 <FAH>

C:Cross-references: GB:M22748; NID:9202514; PIDN:AAA0599.1; PID:9202515

Note: It is uncertain whether Met-1 or Met-63 is the Initiator

C:Superfamily: nerve growth factor beta chain

C:Keywords: glycoprotein; growth factor; homodimer; submaxillary gland

F:184-170/Product: nerve growth factor beta chain #status predicted <MAT>

F:131,176,228/Binding site: carbohydrate (asn) (covalent) #status predicted

F:198-263,241-291,251-293/Disulfide bonds: #status predicted

Query Match 50.4%; Score 368.5; DB 1; Length 303;
 Best Local Similarity 56.5%; Pred. No. 4.8e-31;
 Matches 70; Conservative 13; Mismatches 26; Indels 15; Gaps 1;

9 GEYSVCDSEHWNLTQATDLRGNEVTLPHYRINNVYKKQFEYETTCRVSKPIGAP 68
 193 GEFVCDSEHWNLTQATDLRGNEVTLPHYRINNVYKKQFEYETTCRVSKPIGAP 247
 69 GGGVSVKAGTSSCRGIDNEHNSYCTNHTFVRALTSKNOJAMFIRINAA 128
 248 -----ESGCRGIDSKHNSYCTTHTFVKALTTDROAAWFRIDTA 297
 129 NSMR 132
 298 KAPR 301

RESULT 10
 JLU0097

nerve growth factor beta chain precursor - guinea pig

C:Species: Cavia porcellus (guinea pig)

C:Date: 07-Jun-1990 #sequence_revision 07-Jun-1990 #text_change 15-Mar-1996

C:Accession: JLU0097
 R:Schwarz, M.A.; Fisher, D.; Bradshaw, R.A.; Isackson, P.J.

J. Neurochem. 52, 1203-1209, 1989

A:Title: Isolation and sequence of a cDNA clone of beta-nerve growth factor from the

A:Reference number: JLU0097; MUID:89177243

A:Accession: JLU0097

A:Molecule type: mRNA

A:Residues: 1-241 <SCH>

A:Note: the authors translated the codon GCU for residue 214 as Asp

C:Genetics:

A:Gene: Beta-NGF

C:Superfamily: nerve growth factor beta chain

C:Keywords: glycoprotein; growth factor; hormone

F:1-121/Domain: signal sequence and propeptide (fragment) #status predicted <PRO>

F:122-241/Product: nerve growth factor beta chain #status predicted <MAT>

F:146-154/Region: receptor binding #status predicted

F:69,114/Binding site: carbohydrate (asn) (covalent) #status predicted

Query Match 49.6%; Score 362.5; DB 2; Length 241;
 Best Local Similarity 54.0%; Pred. No. 1.6e-30;
 Matches 68; Conservative 14; Mismatches 29; Indels 15; Gaps 1;

7 HRGEYSVCDSEHWNLTQATDLRGNEVTLPHYRINNVYKKQFEYETTCRVSKPIGAP 66
 129 HMGEFSVCDSEHWNLTQATDLRGNEVTLPHYRINNVYKKQFEYETTCRVSKPIGAP 185
 67 KPGGVSVKAGTSSCRGIDNEHNSYCTNHTFVRALTSKNOJAMFIRINAA 126
 186 -----DSGCRGIDSKHNSYCTTHTFVKALTTANKQAAWFRIDTA 233
 127 SRNSMR 132
 234 NRKAR 239

RESULT 11

A26312

nerve growth factor beta chain precursor - bovine (fragment)

C:Species: Bos primigenius taurus (cattle)

C:Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 16-Jul-1999

C:Accession: A26312
 R:Meier, R.; Becker, Andre, M.; Goeltz, R.; Heumann, R.; Shaw, A.; Thoenen, H.

EMBO J. 5, 1489-1493, 1986

A:Title: Molecular cloning of bovine and chick nerve growth factor (NGF): delineation

A:Reference number: A26312; MUID:86300647

A:Accession: A26312

A:Molecule type: mRNA

A:Residues: 1-125 <MEI>

A:Cross-references: GB:M26809; NID:9163419; PIDN:AAA30666.1; PID:9163420

C:Comment: Nerve growth factor stimulates neurite outgrowth from sympathetic and embr

C:Superfamily: nerve growth factor beta chain

C:Keywords: growth factor; homodimer; seminal vesicle

F:6-115/Product: nerve growth factor #status predicted <MAT>

F:20-85,63-113,73-115/Disulfide bonds: #status predicted

Query Match 49.5%; Score 361.5; DB 2; Length 125;
 Best Local Similarity 56.5%; Pred. No. 9.4e-31;
 Matches 70; Conservative 10; Mismatches 29; Indels 15; Gaps 1;

7 HRGEYSVCDSEHWNLTQATDLRGNEVTLPHYRINNVYKKQFEYETTCRVSKPIGAP 66
 13 HRGEFSVCDSEHWNLTQATDLRGNEVTLPHYRINNVYKKQFEYETTCRVSKPIGAP 69
 67 KPGGVSVKAGTSSCRGIDNEHNSYCTNHTFVRALTSKNOJAMFIRINAA 126


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A>Title: Humanand rat brain-derived neurotrophic factor and neurotrophin-3: gene struct
A:Reference number: A40304; MUID:91365361
A:Accession: C40304
A:Molecule type: DNA
A:Residues: 1-257 <NAI>
A:Cross-references: GB:M61180; NID:g189302; PIDN:AA63231.1; PID:g189303
R:Kaisno, Y.; Yoshimura, K.; Nakahama, K.
FEBS Lett. 266, 187-191, 1990
A>Title: Cloning and expression of a cDNA encoding a novel human neurotrophic factor.
A:Reference number: S10719; MUID:90306351
A:Accession: S10719
A:Molecule type: mRNA
A:Residues: 1-257 <RAI>
A:Cross-references: GB:A53655; NID:g287794; PIDN:CAA37703.1; PID:g287795
R:Yancopoulos, G.D.; Matsomierre, P.C.; Ip, N.Y.; Aldrich, T.H.; Bellusco, L.; Boulton
Cold Spring Harb. Symp. Quant. Biol. 55, 371-379, 1990
A>Title: Neurotrophic factors, their receptors, and the signal transduction pathways the
A:Reference number: A60536; MUID:92111157
A:Accession: C60536
A>Status: not compared with conceptual translation
A:Molecule type: DNA
A:Residues: 1-73,'Q','75-77','R','79-108','T','110-257 <XAN>
C:Genetics:
A:Gene: GDB:NTRF3
A:Cross-references: GDB:I25917; OMIM:162660
A:Map position: 12p13-12p13
C:Superfamily: nerve growth factor beta chain
C:Keywords: glycoprotein
F:1-18/Domain: signal sequence #status predicted <src>
F:19-138/Domain: propeptide #status predicted <pro>
F:139-257/Product: neurotrophin-3 #status predicted <MAT>
F:131/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match          43.5%; Score 318; DB 2; Length 257;
Best Local Similarity 47.2%; Pred. No. 7/e-26;
Matches 60; Conservative 20; Mismatches 31; Indels 16; Gaps 2;

Oy      7 HNGEVSVCSEEHMGNGLATDLRGNEYVYLPHVRINNVYKKOMFYETTCRVSKPIGAP 66
        ||||| | | : : : ||::||| : : | | ||| : : |
Db     145 HNGEVSVCSESLAMVDKSSALDRGHQVTVLGEIKGNSPVKYFYETTRKEARPV-- 201
        : ||||| : ||| : ||::||| : : | | ||| : : |
Oy      67 KBGVSVYKAGTSRCGRGIDNEHMNSYCTNVHTFVRALTYSKNO-IARFTIRINACV 125
        : ||||| : ||| : ||::||| : : | | ||| : : |
Db      202 -----KNGCRGIDDKHMSQCKTSQTLYVALTSENNNLVGRWRIRIDSCVA 249
        : ||||| : ||| : ||::||| : : | | ||| : : |
Oy     126 LSRNSMR 132
        ||| |
Db     250 LSRKTGR 256

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Job time: 23005 sec